

**IN THE CLAIMS**

Please consider the following claims:

Claim 1 (currently amended): A method for modifying a plant to produce an antibody or an active fragment of an antibody showing the antigen binding activity of the antibody ~~or a protein functionally equivalent to the antibody showing the antigen binding activity of the antibody~~ in a cellular compartment, comprising introducing into a plant a DNA sequence encoding a heavy chain immunoglobulin devoid of a variable light chain domain, or an active fragment of said immunoglobulin ~~said fragment being devoid of a variable light chain domain, or a sequence encoding a protein functionally equivalent to the immunoglobulin~~, said DNA sequence being operably linked to one or more promoters, and expressing the antibody or fragment ~~or protein functionally equivalent to the antibody~~, which are devoid of light chain domains but capable of specific binding with an antigen, in the cellular compartment.

Claim 2 (currently amended): The method according to claim 1 wherein the DNA sequence encoding the heavy chain immunoglobulin or fragment ~~or functional equivalent thereof~~ is obtainable from camelids.

Claim 3 (previously presented): The method according to claim 1 or claim 2 wherein the plant is selected from tobacco, pea, potato, spinach, tomato or tea.

Claim 4 (currently amended): The method according to claim 1 wherein the heavy chain immunoglobulin or active fragment ~~or functional equivalent thereof~~ binds to a protein present in the plant.

Claim 5 (currently amended): The method according to claim 1 wherein the heavy chain immunoglobulin or active fragment ~~or functional equivalent thereof~~ binds to a plant pathogen or animal pathogen.

Claim 6 (currently amended): The method according to claim 1 wherein the heavy chain immunoglobulin or active fragment ~~or functional equivalent thereof~~ binds to a plant hormone or plant metabolite.

Claim 7 (previously presented): A plant prepared according to the method of claim 1.

Claim 8 (withdrawn): A modified plant having, in a desired cellular compartment, enhanced levels of heavy chain immunoglobulins or active fragments or derivatives thereof or proteins functionally equivalent thereto compared to equivalent but unmodified plants.

Claim 9 (currently amended): Seeds, fruits, progeny and hybrids of the plant according to claim 7 which comprise said DNA sequence encoding a heavy chain immunoglobulin or active fragment thereof ~~or functional equivalent thereof~~.

Claim 10 (withdrawn): A food product comprising a plant according to claim 7 or 8.

Claim 11 (withdrawn): A method for increasing pathogen resistance in a plant comprising introducing into said plant a DNA sequence encoding a heavy chain immunoglobulin which binds to a plant or animal pathogen, or an active fragment or derivative thereof or one or more sequences encoding a protein functionally equivalent thereto, according to the method of claim 1.

Claim 12 (withdrawn): A method for modulating plant metabolism comprising introducing into said plant a DNA sequence encoding a heavy chain immunoglobulin which binds to a protein present in said plant or an active fragment or derivative thereof or one or more sequences encoding a protein functionally equivalent thereto according to the method of claim 1.

Claim 13 (withdrawn): A method for preparing a heavy chain immunoglobulin or an active fragment or derivative thereof comprising the steps of:

- (i) modifying a plant according to the method of claim 1, and
- (ii) extracting from said modified plant the heavy chain immunoglobulin or active fragment or derivative thereof produced therein.

Claim 14 (currently amended): The method according to claim 1 wherein said DNA sequence further comprises an additional sequence encoding a peptide sequence capable

of targeting said antibody or fragment or functional equivalent thereof, to said cellular compartment.